Dupasquier that it was quite common to sell these materials made up, and the receipt was equal parts by weight of phosphorus, chlorate of potash, arsenic in powder, and powdered gum Arabic. Another clerk stated to him, that the druggists are in the constant habit of selling arsenic to the makers of lucifer matches.

The above opinions are rendered highly probable from the fact that the manufacturers at Lyons do not employ arsenic. The well known stimulant action of phosphorus, when taken internally, on the genital organs, led him to suppose that a similar result would occur on constant exposure to its vapours, but M. Dupasquier was surprised to find that no indication of this had in any case been noticed at Lyons.—*Comptes Rendus*, August 31, 1846. T. R. B.

68. *On the mode of testing the presence of minute quantities of Alcohol.* By Robert D. Thomson, M. D., Lecturer on Practical Chemistry in the University of Glasgow. —The determination of the presence of minute quantities of alcohol is a chemical point of some importance, especially in judicial cases. The usual method hitherto adopted for detecting alcohol in mixed fluids, is to subject the fluid suspected to contain it to distillation, at a temperature not greater than that which is required to cause the alcohol to pass over into a receiver and then to judge of the presence of spirit by the vinous odour of the distilled fluid. When alcohol, in the form of gin, whisky or brandy, &c., has been swallowed, if death takes place within a short period of the introduction of the fluid, the odour of the spirituous liquors will be distinctly perceptible to one inspecting the interior of the stomach, but if a considerable time should elapse, as, for example, a few hours between the introduction of the spirit and death, it is rarely found that the smell can be detected. Again, if the person should die under the influence of spirituous liquors and the stomach were not examined within a limited period, the odour of alcohol might not be perceptible, since as absorption goes on for several hours after death, and as volatile fluids appear to be peculiarly susceptible of rapid absorption, the whole of the alcoholic fluid might be removed from the intestinal canal into the circulation. It has been affirmed that alcohol has been detected in the brain of gin drinkers, but as the mode of testing adopted was merely the impression made upon the nerves of smell, we may perhaps be allowed to doubt the accuracy of the experiment. It has been affirmed that the gin obtained from the brain has been inflamed, and if this were correct, we should then be entitled to quote nasal and ocular proofs of the presence of alcohol in the brain, but as the gin of the shops is so weak that, in its natural state, it will scarcely burn, we may also be permitted to be skeptical in reference to this second proof. These views do not tend to disprove the possibility of the presence of alcohol in the vessels of the brain and other portions of the body, because we know that hydrocyanic acid passes to the very extremities of the body and can be distinctly detected by its odour, until it has been either removed from the system by the combustion of respiration, or simply by exhalation from the lungs. Now alcohol and hydrocyanic acid are somewhat analogous in a chemico-physiological point of view, as they possess a powerfully sedative effect upon the system, are exceedingly volatile, readily absorbable, and require much oxygen to resolve them into simpler forms. For these reasons, it appears highly probable that alcohol may be capable of detection in the vessels of the system when it has been swallowed in large quantities. The experiment could, however, only be made on the inferior animals, and we should require some more definite test than the mere smell of the alcohol.

There are other circumstances, in a judicial point of view, in which it may be of importance to detect minute quantities of alcohol. For example, to distinguish small portions of the liquid preparations of opium. In medicine, there are used the solution of opium in alcohol; the solution of opium in wine; the solution of opium in alcohol with benzoic acid and ammonia; the solution of opium in vinegar; and, lastly, the solution in water. When these preparations are entire, there is not much difficulty in their discrimination, but if they have been exposed to the air, much of the alcohol escapes, and they may all become analogous to a solution of opium in water. To distinguish those which contain alcohol from those which do not, enables us to divide them into two classes, and thus to simplify the inquiry. For these, and many other cases, where minute detection is necessary, I have been in the habit, for some years, of employing a method which depends upon a

well known fact, the dehydrogenation of alcohol by means of oxygen. For this purpose, the fluid to be tested, if coloured, or a mixed one, is to be distilled in the water bath until one-third of it passes over. Should the liquor contain any acetic acid, this may be saturated previous to distillation with carbonate of soda, in order to remove the vinegar smell, which might interfere with the odour of the subsequent test. Into the distilled liquor supposed to contain alcohol, should be dropped a crystal or two of chromic acid and the liquor stirred. If the smallest quantity of alcohol be present, the green oxide of chrome will begin to be disengaged, and at the same time the smell of aldehyde is distinctly perceptible.

By means of this simple test, it is possible to distinguish a drop of alcohol in half an ounce, and even in an ounce of water. When chromic acid is not at hand, the experiment may be made with bichromate of potash and sulphuric acid. This perhaps affords the most distinct method of performing the experiment, and may be conducted as follows. Drop in a few grains of powdered bichromate into a small flat glass (which tapers towards the bottom) containing the solution to be examined, and add a few drops of oil of vitriol. If alcohol is present, the green oxide will be observed to be developed on the surface of the undissolved salt, and the characteristic odour of aldehyde will speedily be perceptible.—*Monthly Journal of Medical Science*, December, 1846. (For Dr. Percy's method of detecting alcohol, see *Amer. Jour. Med. Sciences*, new series, vol. iv., p. 515.) T. R. B.

69. *Invalidity of a Contract made by a Lunatic* (Molton *v.* Camroux, English Court of Exchequer).—This was an action by the representatives of Thomas Lee, deceased, to recover from the National Loan Fund Life Insurance Company, the sum of £355, paid as consideration for an annuity granted by the Company to him on the 29th of August, 1843, upon the ground that he was of unsound mind and incapable of making any valid disposition of his goods at the time when the annuity was granted. Soon after that time the symptoms of insanity became so very decided that he was placed in a lunatic asylum. The attorneys employed by his representatives wrote to the defendants, stating that fact, and requiring them to cancel the policies and refund the sum now sought to be recovered. The company declined to do so, and upon the 14th of October, 1844, Lee died of paralysis of the brain, in Dr. Warburton's lunatic asylum. The question, therefore, for the decision of the jury was, whether the deceased was of unsound mind upon the 29th of August, 1843, when the policy was executed; if so, the contract was void. Upon this subject, several witnesses were called on behalf of the defendants, to show that the bearing and demeanour of the deceased, when dealing with the Company, were of such a character as to render it impossible to imagine that he was of unsound mind. The jury found a verdict for the plaintiff for the full amount claimed.—*London Atlas*, Dec. 26, 1846. T. R. B.

70. *Procuring of Abortion.* Commonwealth *v.* Luceba Parker.—The defendant was charged with having thrust into the womb and body of a married woman, then pregnant with child, a sharp metallic instrument, with the intent to cause and procure the said woman to miscarry and prematurely bring forth said child, and that in consequence it was born dead.

On the trial it appeared in evidence that the acts alleged in the indictment were done by the defendant, with the consent of the woman. The jury found a verdict of guilty and her counsel moved an arrest of judgment, because it was not set forth, that the woman was quick with child, at the time the operation was performed. The judge instructed the jury that it was not necessary to prove this fact, but he deemed the question involved so important that he reported it to the Supreme Court (of Massachusetts).

After argument, the Chief Justice, in delivering the opinion of the Court, stated that the whole matter resolved itself into one question: "whether it is an indictable offence at common law, to administer a drug or perform an operation upon a pregnant woman, with her consent, with the intention and for the purpose of causing an abortion and premature birth of the fœtus of which she is pregnant, by means of which an abortion is in fact caused, without averring and proving at the time of the administration of such drug or the performance of such operation, such woman was quick with child."